

## CLAIMS:

1. A treatment room (7) suitable for recording images of a human or animal body on the basis of magnetic resonance (MR), wherein the walls (7a), the ceiling (7b) and the floor (7c) of the treatment room form an electromagnetic shield for a magnetic resonance (MR) imaging device (1) arranged in the treatment room, which MR imaging device  
5 comprises at least
  - a target area in which the human or animal body can be accommodated,
  - a housing (2, 3, 4) comprising at least one main magnetic unit and at least one gradient magnetic unit for generating one or more magnetic fields in the target area (5), as well as
- 10 - at least one radio frequency (RF) pulse unit (6) for supplying an electromagnetic RF pulse to the target area (5), characterized in that
  - means (10, 11, 12, 13, 14, 15, 16, 17) are present which, during operation, counteract the electromagnetic effects (8) of the RF pulse in the treatment room (7) outside  
15 the target area (5).
2. A treatment room as claimed in claim 1, characterized in that the means are placed in the treatment room.
- 20 3. A treatment room as claimed in claim 2, characterized in that the means are provided on at least one of the walls and/or the ceiling and/or the floor of the treatment room.
4. A treatment room as claimed in claim 3, characterized in that the means consist of a layer made of stainless steel.
- 25 5. A treatment room as claimed in claim 3, characterized in that the means consist of an electro conductive coating.

6. A treatment room as claimed in claim 3, characterized in that the means consist of one or more elements (10) made of a material that absorbs the electromagnetic waves.

5 7. A treatment room as claimed in claim 6, characterized in that the electro conductive elements are embodied so as to be ferrite tiles (10).

8. A treatment room as claimed in claim 6 or 7, characterized in that the electro conductive elements have an open fiber structure of electro conductive material.

10 9. A treatment room as claimed in claim 6, characterized in that the electro conductive elements have a spatial structure (11) directed towards the interior of the treatment room.

15 10. A treatment room as claimed in claim 2, characterized in that the means can be moved relative to the MR imaging device in the treatment room.

11. A treatment room as claimed in claim 2 or 10, characterized in that the means comprise at least one LCR circuit (13) which is oriented more or less perpendicularly to the 20 magnetic field generated by the RF pulse.

12. A treatment room as claimed in claim 2 or 10, characterized in that the means comprise at least one LCR dipole antenna (14) which is oriented more or less parallel to the electric field generated by the RF pulse.

25 13. A treatment room as claimed in claim 12, characterized in that the LCR dipole antenna is electrically connected to the electromagnetic shield and has an electric length equal to  $\frac{1}{4} \lambda$ , where  $\lambda$  is equal to the wavelength of the RF pulse.

30 14. A treatment room as claimed in claim 12, characterized in that the LCR dipole antenna is connected to the electromagnetic shield so as to be electrically shielded there from, and has an electric length equal to  $\frac{1}{2} \lambda$ , where  $\lambda$  is equal to the wavelength of the RF pulse.

15. A treatment room as claimed in claim 2 or 10, characterized in that the means comprise at least one electro conductive plane (12) which can be arranged in the treatment room.

5 16. A treatment room as claimed in claim 1, characterized in that the means form part of the MR imaging device.

17. A treatment room as claimed in claim 16, characterized in that the means (15, 16, 17) have a comparatively high electric resistivity as compared to the resistivity of the 10 material of the housing, and are provided on the housing so as to enclose the RF unit.

18. A treatment room as claimed in claim 17, characterized in that the means consist of a large number of abutting waveguides (15), provided with at least one electrically open end (15a-15b).

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19. A treatment room as claimed in claim 18, characterized in that the electric length of the waveguide is equal to  $\frac{1}{4} \lambda$ , where  $\lambda$  is equal to the wavelength of the RF pulse.

20. A treatment room as claimed in claim 17 or 18, characterized in that a reactive 20 element (15c) is provided near at least one end (15a-15b) of the waveguide.

21. A magnetic resonance imaging device comprising a target area in which the human or animal body can be accommodated,

- a housing comprising at least one main magnetic unit and at least one gradient 25 magnetic unit for generating one or more magnetic fields in the target area, as well as - at least one radio frequency (RF) pulse unit for supplying an electromagnetic RF pulse to the target area, and provided with means as described in one or more of claims 16 to 20.